

## Chromatographic Separations in Sugar Analysis and Processes

### Editorial

The three papers by Le Barc'H et al., O'Flaherty et al. and Vaccari et al. were given at an international symposium entitled *Chromatographic Separations in Sugar Analysis and Processes*. This Symposium was organised by Association Andrew VanHook (AVH), a non-profit organisation devoted to the advancement of knowledge on sugars.

AVH Association is located at Reims, at the Laboratory of Industrial Physical Chemistry, Faculty of Sciences, University of Reims Champagne-Ardenne. Other papers given at the same symposium dealing with anion exchange chromatography or the technology of chromatographic separations for molasses desugarisation or glucose syrup processes may be found at the website<sup>1</sup> of AVH Association and downloaded.

Separation techniques are helpful for both analytical and technological purposes. Gas-liquid chromatography was used to study mutarotation kinetics in concentrated D-glucose solutions with the aim to find an explanation to the particularly low rate of growth of D-glucose monohydrate crystals. Another chromatographic technique useful for the sugar technologist is planar chromatography. Automation of elution, sample

positioning and detection makes this simple and reliable technique a good tool for the analysis of oligosaccharides such as raffinose and kestoses. This type of information allows better understanding of the modification of sucrose morphology in presence of these oligosaccharides as well as a more accurate analysis of cane and beet molasses.

Finally, the team of Dr. Cholli at the University of Massachussets-Lowell, presented data obtained with a new device which can detect and identify simultaneously several cations, anions and organic acids present as traces in sugars, wines or drinking waters. The new device is portable, quick, reliable and cost-effective. It is based on the principle of capillary zone electrophoresis.

The interconnection between modern laboratory analytical tools and optimised separation processes was clearly demonstrated at the AVH Symposium.

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<sup>1</sup> <http://www.univ-reims.fr/Externes/AVH/avh.htm>